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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,881

10/09/2006

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EXAMINER

BERHANE, YOSIEF H

ART UNIT

PAPER NUMBER

2467

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,881	Applicant(s) BARKER ET AL.	
	Examiner YOSIEF BERHANE	Art Unit 2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 11-23 have been examined and are pending.

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449 submitted **06/28/2006** is attached to the instant office action.

3. ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

5. A person shall be entitled to a patent unless –

- 6.
7. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 11-14 and 22-23** are rejected under 35 U.S.C. 102(e) as being anticipated by Patent **7,518,883** to Suitor et al. (hereinafter Suitor).

9. **As per claim 11**, Suitor teaches a pluggable module for a telecommunications network interface card, the module comprising: a first side configured to be received by a Small Form

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Pluggable (SFP) optical receptacle disposed on the telecommunications network interface card (Col. 4, lines 6-13, Sutor discloses STM-1 electrical SFP is plugged into an STM-1/STM-4 SFP interface card);

10. and an electrical connector configured to electrically connect the pluggable module to a telecommunications network unit at a predefined electrical interface rate (Col. 4, lines 6-13, Sutor discloses STM-1/STM-4 SFP interface card, where it is STM-1/STM-4 are predefined rates).
11. **As per claim 12 and 22**, Sutor teaches wherein the predefined electrical interface rate comprises at least one of a SONET interface rate, a PDH interface rate, and an SDH interface rate (Col. 4, lines 6-13, Sutor discloses STM-1/STM-4 SFP interface card, where it is STM-1/STM-4 are predefined rates).
12. **As per claim 13 and 23**. Sutor teaches wherein the predefined electrical interface rate comprises an SDH STM-n electrical rate (Col. 4, lines 6-13, Sutor discloses STM-1/STM-4 SFP interface card, where STM-1 is supportable in STM-1e or STM-1 rates).
13. **As per claim 14**. Sutor teaches a pluggable module for a telecommunications network interface card, the module comprising: an interface compatible with a Small Form Pluggable (SFP) optical receptacle (Col. 4, lines 6-13, Sutor discloses STM-1 electrical SFP is plugged into an STM-1/STM-4 SFP interface card);
14. and an electrical interface configured to electrically connect the pluggable module to a telecommunications network unit at a predefined electrical interface rate (Col. 4, lines 6-13, Sutor discloses STM-1/STM-4 SFP interface card, where it is STM-1/STM-4 are predefined rates).

15. ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

17. (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. **Claims 15-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over are unpatentable over Suitor as applied to claim 14 above and further in view of Publication **2005/0249468** to Aronson et al. (hereinafter Aronson).

19. **As per claim 15.** Suitor does not disclose expressly: wherein the interface comprises a first amplifier configured to amplify electrical signals transmitted to the SFP receptacle and a second amplifier configured to amplify electrical signals received from the SFP receptacle.

20. Aronson discloses in Paragraph 0007, a receiver circuit typically consists of a Receiver Optical Subassembly (ROSA), which typically includes a fiber receptacle as well as a photodiode and pre-amplifier circuit. The ROSA 108 is in turn connected to a post-amplifier integrated circuit, which generates a fixed output swing digital signal which is connected to outside circuitry

21. Aronson and Suitor are analogous art because they are from similar fields of endeavor dealing specifically with optical transceivers that conform to SFP standards.

22. At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the system of Sutor by including a first and a second amplifier as suggested by Aronson.
23. The rationale to do so would have been to enhance communication reliability of transmitting and receiving optical signals by providing uniform amplitude digital signals (Paragraph 0029, Aronson)
24. Therefore it would have been obvious to combine Aronson with Sutor for the benefit of enhancing communication reliability in an optical network to obtain the invention as specified in claim 15.
- 25.
26. **As per claim 16**, the combination of Sutor and Aronson teach wherein the electrical interface comprises a driver configured to transmit electrical signals to the telecommunications network unit (Paragraph 0008, Aronson discloses The transmitter circuit, or laser driver circuit, accepts high speed digital data and electrically drives a Light Emitting Diode (LED) or laser diode to create equivalent optical pulses),
27. and an equalizer configured to receive electrical signals from the telecommunications network unit (Fig. 2A as well as paragraph 0029, Aronson discloses a ROSA that receives and converts optical signals to electrical signals then sends the electrical signals to a post-amp circuit).
28. **As per claim 17**, the combination of Sutor and Aronson teach an encoder to encode the electrical signals being received by the second amplifier into the electrical signals being

transmitted by the driver (Fig. 2a, as well as paragraph 0030, Aronson discloses optical signals received at the TOSA are first amplified by a pre-amplifier),

29. and a decoder to decode the electrical signals received by the equalizer into the electrical signals being transmitted by the first amplifier (Fig. 2A as well as paragraph 0029, Aronson discloses a ROSA that receives and converts optical signals to electrical signals then sends the electrical signals to a post-amp circuit).

30. **As per claim 18.** The combination of Suitor and Aronson teach wherein the equalizer is further configured to interface with the SFP receptacle (Fig. 2a, Aronson discloses a TOSA that interfaces with an optical network).

31. **As per claim 19.** The combination of Suitor and Aronson teach memory configured to interface with the SFP receptacle (Fig. 2a, box 234, memory).

32. **Claim 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Suitor as applied to claim 14 above and further in view of Patent **6,854,894** to Yunker et al. (hereinafter Yunker).

33. **As per claim 20.** Suitor does not disclose expressly: one or more connectors molded into a block of plastic.

34. Col. 8, lines 48-51, discloses that multi-optical receptacle assembly has a unibody construction; the multi-optical receptacle assembly may be molded in one piece from plastic or cast from another suitable material.

35. Yunker and Suitor are analogous art because they are from similar fields of endeavor dealing specifically with optical transceivers that conform to SFP standards.
36. At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the system of Suitor by molding plastic for transceiver assembly as suggested by Yunker.
37. The rationale for doing so would have been to enhance performance and functionally by providing insulation for transceiver assembly (Col. 14, lines 48-52, Yunker)
38. Therefore it would have been obvious to combine Yunker with Suitor for the benefit of enhancing functionality and performance to obtain the invention as specified in claim 20.
39. **As per claim 21.** the combination of Suitor and Yunker teach a printed circuit board (Col. 2, lines 13-15, Yunker discloses a plurality of mounting pins extending from said cage body for mounting said transceiver on a printed wiring board)
40. including one or more contacts molded in the block of plastic (Col. 8, lines 48-51, discloses that multi-optical receptacle assembly has a unibody construction; the multi-optical receptacle assembly may be molded in one piece from plastic or cast from another suitable material.),
41. the one or more contacts being configured to interface the pluggable module with the telecommunications network interface card (SFP) optical receptacle disposed on the telecommunications network interface card (Col. 4, lines 6-13, Suitor discloses STM-1 electrical SFP is plugged into an STM-1/STM-4 SFP interface card).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yosief Berhane whose telephone number is (571) 270-7164. The examiner can normally be reached at 9:00-6:00 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached at (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/YOSIEF BERHANE/

Examiner, Art Unit 2467

/Hong Cho/

Primary Examiner, Art Unit 2467